



# बिहार गजट

## असाधारण अंक

### बिहार सरकार द्वारा प्रकाशित

16 माघ 1941 (श0)  
(सं0 पटना 108) पटना, बुधवार, 5 फरवरी 2020

सं0 14-B-Heavy(छोआ)-22 / 18-522  
मद्य निषेध, उत्पाद एवं निबंधन विभाग  
(मद्य निषेध एवं उत्पाद)

संकल्प

5 फरवरी 2020

**विषय:-**जैव ईंधन पर राष्ट्रीय नीति, 2018 के आलोक में उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय (खाद्य एवं सार्वजनिक वितरण विभाग) भारत सरकार द्वारा निर्गत दिशा निर्देश के अधीन राज्य के चीनी मिलों में स्थापित छोआ आधारित आसवनियों को बी-हैवी मोलासेस (B-Heavy Molasses) से इथनॉल उत्पादन की स्वीकृति।

विभागीय संकल्प संख्या-386 दिनांक 27.01.2016 के द्वारा छोआ आधारित आसवनियों को अपनी क्षमता का शत-प्रतिशत उपयोग कर पेट्रोल में समिश्रण हेतु सी-हैवी मोलासेस से इथनॉल उत्पादन की अनुमति दी गयी है। जैव ईंधन पर राष्ट्रीय नीति, 2018 के अधीन वर्ष 2030 तक पेट्रोल में 20% इथनॉल समिश्रण का लक्ष्य रखा गया है। उक्त लक्ष्य के प्राप्ति के उद्देश्य से भारत सरकार द्वारा B-Heavy Molasses का विचलन (Diversion) कर इथनॉल उत्पादन की अनुमति दी गई है। भारत सरकार की नीति के आलोक में उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय (खाद्य एवं सार्वजनिक वितरण विभाग) भारत सरकार के ऑफिस मेमोरेण्डम सं0 4/1/ 2018-(BP&E)(Part-1) दिनांक 22.11.2019 के भाग-III की कड़िका 'A' द्वारा B-Heavy Molasses का विचलन कर इथनॉल निर्माण के लिए दिशा निर्देश निर्गत किया गया है।

**(अनुलग्नक- उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय (खाद्य एवं सार्वजनिक वितरण विभाग) का ऑफिस मेमोरेण्डम सं0 दिनांक 22.11.19)**

2. बी-हैवी मोलासेस से इथनॉल उत्पादन के संबंध में गन्ना उद्योग विभाग से परामर्श की मांग की गयी। गन्ना उद्योग विभाग का मतव्य है कि राज्य में चीनी का भंडार अधिक होने की स्थिति में बी-हैवी मोलासेस से इथनॉल उत्पादन में गन्ना उद्योग विभाग को आपत्ति नहीं है, किन्तु चीनी का भंडार की कमी होने की स्थिति में सी-हैवी मोलासेस से इथनॉल उत्पादन किया जा सकेगा।

3. सम्यक विचारोपरान्त निर्णय लिया गया है कि संलग्न उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय (खाद्य एवं सार्वजनिक वितरण विभाग), भारत सरकार के ऑफिस मेमोरेण्डम सं0 4/1/2018-(BP&E)(Part-1) दिनांक 22.11.2019 (छाया प्रति संलग्न) में निहित शर्तों का पालन करते हुए एवं गन्ना उद्योग

विभाग, बिहार के परामर्श के आलोक में आयुक्त उत्पाद-सह-छोआ नियंत्रक द्वारा बी-हैवी मोलासेस का विचलन, संचयन तथा आवंटन एवं उससे इथनॉल उत्पादन की अनुमति प्रदान की जायेगी।

**आदेश:-** आदेश दिया जाता है कि संकल्प को सर्वसाधारण की जानकारी हेतु बिहार गजट के असाधारण अंक में प्रकाशित कराया जाय।

बिहार-राज्यपाल के आदेश से,  
आमिर सुबहानी,  
सरकार के अपर मुख्य सचिव।

**अनुलग्नक-2**

F.No. 4/1/2018-(BP&E)(Part-1)

Government of India

Ministry of Consumer Affairs, Food, and Public Distribution

(Department of Food and Public Distribution)

Directorate of Sugar & Vegetable Oils

Krishi Bhawan, new Delhi

Dated:22-11-2019

**OFFICE MEMORANDUM**

**Subject:-** Mechanism for diversion of B-Hy molasses, C-Hy molasses, Cane juice, Sugar syrup and sugar used by sugar mills for production of ethanol as well as quantity of ethanol produced from the B-Hy molasses, C-Hy molasses, Cane juice, Sugar syrup and sugar by the distilleries attached with sugar mills: Guidelines regarding.

The undersigned is directed to say that the Government vide DFPD's Order No.S.O.3663 (E)/Ess.Comm./Sugarcane dated 26.07.2018 amended the Sugarcane (Control) Order, 1966 and inter-alia allowed sugar mills for production of ethanol directly from sugarcane juice or B-Hy molasses.

2. In order to formulate guide-lines to operationalize the supply of B-Hy molasses and cane juice for production of ethanol by distilleries, a Committee was constituted under the Chairmanship of Director (NSI); Kanpur comprising of other members viz. representatives from Excise and Sugar/Sugarcane Departments of Uttar Pradesh and Maharashtra, Ministry of P&NG, OMCs, ISMA and NFCSE. The committee suggested a detailed mechanism to be put in place. by the sugar mills which divert B-Hy molasses/ cane juice for production of ethanol. Based on the recommendation of the Committee, the DFPD Vide OM NO. 4/1/2018-(BP&E) dated 07.01.2019 issued detailed guidelines indicating the mechanism for production of ethanol separately by diversion of B-Hy molasses or cane juice.

3. Further, on representations received from sugar mills, the CCEA in its meeting dated 03.09.2019 has inter-alia decided to also allow production of ethanol directly from sugar syrup and sugar besides sugarcane juice and B-Hy/C-Hy molasses. Accordingly, DFPD vide subsequent order No S.O.4149(E) /Ess.comm./Sugarcane dated 19.11.2019 has notified production of ethanol directly from sugar syrup or sugar and to make it operationalize, the said Committee was again mandated to suggest a detailed mechanism and also review the earlier guide-lines for suitable amendment.

4. On the basis of subsequent recommendations of the Committee, this Department has formulated a new set of guide-lines in supersession of the earlier guide-lines issued on 07.01.2019 indicating the detailed mechanism for production of ethanol separately by diversion of B-Hy molasses or cane juice/sugar syrup/sugar which is enclosed herewith for strict compliance by the sugar mills and concerned distilleries.

Makarand Phadke,  
Director (S&VO) #011-23383760

**Guidelines for the sugar Mills Diverting C-Hy, B-Hy, Sugarcane Juice, Sugar Syrup and Sugar for production of ethanol by distilleries**

**Part-I**

**Definitions:-**

- i. Sugarcane juice shall mean, primary juice, secondary juice, mixed juice and clear juice as obtained by sulphitation or defecation process.
- ii. Sugar syrup shall mean concentrated sugarcane juice having total dissolved solid content not less than 50<sup>0</sup> as indicated by brix.
- iii. Sugar for this purpose shall mean white or off-colour or moist sugar having pol percent not less than 98.0.

**Part-II**

**General Recommendation:**

- i. During sugar season, the distilleries should obtain a process validation report from technical institute viz. national Sugar Institute (NSI), Kanpur/vasantdada Sugar Institute (VSI) Pune or any technical institute designated by State Government.
- ii. The process validation report is to be provided to the state excise officials or any competent authority as designated by state Government.
- iii. The ethanol produced through different routes i.e. B-heavy molasses, cane juice, sugar syrup and sugar is to be certified by the concerned state Excise department or any authority as designated by the state government with unique serial no. for proper identification.
- iv. The quality of the ethanol produced by either of the routes should conform to the desired specifications as per IS 15464 (2004): Anhydrous Ethanol for use in Automotive Fuel or as per the requirement of OMC's as specified in their tender document, the ethanol content% by volume shall not be below 99.6 at 15.6 deg.C
- v. The distilleries i.e ethanol units shall be operated with one type of feed stock at a time i.e
  - (a) C-Hy molasses
  - (b) B-Hy molasses and,
  - (c) Sugarcane Juice/Sugar syrup/Sugar.

**Part-III**

**A. Diversion of B-Hy Molasses:**

- i. The C-Hy and B-Hy molasses from respective centrifugals are to be collected in separate receiving tanks. The C-Hy molasses and B-Hy molasses tanks should have proper identification labeling in different Colours e.g. for C-Hy molasses the labeling may be in darker brown, whereas, for the B Hy molasses it can be lighter brown. Similar colour coding to be provided for their respective pipe lines in the sugar factory wherever used.
- ii. Separate pumps with no interconnecting pipe lines to be used for both types of molasses so as to send them to the respective storage tanks available in the sugar factory having proper identification marks. Under the normal circumstances, no underground pipelines shall be used for the purpose.
- iii. While diverting B-Hy molasses, boiling of C or other down the line massecuite shall not be allowed. Separate storage facilities to be provided for C Hy & B Hy molasses and any intermixing of the two different qualities of molasses shall be avoided. However during the period when B- Heavy molasses is diverted, the sugar factories are allowed to use the existing C- Heavy molasses storage facilities subject to validation of their storage plan by NSI/VSI or any competent

- authority as designated by State Government and with prior information to the state excise officials .
- iv. In case, in a sugar factory, two separate processing streams from cane crushing to sugar bagging and molasses storage are available and proper recording of data is made for the two different streams, factory may divert B-Heavy from one stream subject to fulfillment of other conditions as specified in the guidelines.
  - v. Maxwell Bolougne type weighing scales or load cell based weighing system etc. to be provided to ascertain the respective molasses sent out of the process house of the sugar factory to the respective storage tanks. Alternatively, the factories may use calibrated mass flow meters with check weighment facility
  - vi. Like wise to measure and record the consumption of the two types of molasses for ethanol production separate system for the liquidation to be provided in the respective storage tanks having separate pumps with a Maxwell Bolougne type weighing scale or load cell based weighing system or installing calibrated mass flow meters in the discharge line with check weighment facility. After the flow meters or weighing system the molasses may be sent out through a common line.
  - vii. Proper recording of production, dispatch of each type of molasses is to be made in log books on two hourly basis while stock taking to be made on day to day basis by the sugar factory. A Separate log-book is to be maintained for this purpose.
  - viii. The distillery i.e. ethanol unit shall be operated with one type of feed stock at a time i.e. C-Hy or B Hy molasses as per para (iii) above for molasses & ethanol produced from two different routes to have correct estimation of the ethanol yield from either type of molasses. In case the factory gives an undertaking to produce and divert only B- Heavy molasses the distilleries as per para (iii) above may be allowed to use the existing C- Heavy molasses storage and ethanol storage facilities with prior information to the state excise officials or any competent authority as designated by State Government.
  - ix. The important quality parameters viz. Brix, Purity, TRS (Total reducing sugar) content of B-Hy molasses sent from the processing house to be recorded on day to day basis by the sugar mill. Such analysis shall also be carried out and recorded by the sugar mill at the time of dispatch from the storage tanks and by the distillery at the time of its use.
  - x. B-Hy molasses purity being recorded by the factory shall be compared with the purity obtained during the same period of earlier three crushing seasons and in normal circumstances a variation of not more than (-) 5% in the B-Hy molasses purity shall be considered. For the factories not operated earlier, the brix and purity of such molasses shall be inferred from the purities recorded by nearby factories or shall be considered as minimum 46.0. The factories undertaking B-Hy diversion shall get the process and figures of molasses diversion (quality and quantity) validated from NSI/VSI or any competent authority as designated by State Government.
  - xi. The distillery i.e. ethanol unit, shall also record consumption and stock of molasses, production of ethanol as well as distillation and fermentation efficiency of the plant on daily basis The distillery is also required to analyze and record the data with respect to quality of the molasses at the time of its use. For facilitating the analysis of C-Hy or B-Hy molasses for different parameters and for ethanol content assistance of NSI/VSI or any NABL accredited laboratory or any competent laboratory as designated by state Government shall be taken up.

- xii. It would be essential to weigh and record the quantity of molasses used and ethanol produced from such molasses to ascertain the yield and potential.
- xiii. Due to the diversion of intermediate molasses i.e. B-Hy molasses instead of the conventional final molasses i.e. C-Hy or C-molasses, additional sugar loss is bound to occur resulting in lowering of sugar recovery by the factory but enhancing the ethanol production. Thus, sugar recovery should be estimated by using the following formula:

$$\text{Sugar Recovery \% cane} = \frac{\text{Pol in Mixed Juice \% cane} \times (J-36.40)K}{0.636J}$$

(Where J is the purity of Mixed juice and value of K is 1.002).

### **B. Diversion of sugarcane juice/sugar Syrup:**

- i. Calibrated mass flow meters with check weighment facility shall be provided to ascertain the quantity of juice/syrup diverted for ethanol production.
- ii. In case of partial diversion no interconnection pipe lines/by-pass arrangement shall be used. The juice/syrup diverted to the ethanol unit shall be stored in separate storage tanks having proper identification marks. Under the normal circumstances, no underground pipelines shall be used for the purpose of delivering the juice/syrup.
- iii. Proper recording of juice/syrup dispatches to be made in log books by the sugar factory. Recording of juice/syrup received, its consumption, ethanol Production, distillation and dermentation efficiency shall be made on daily basis, by the distillery.
- iv. Important parameters with respect to quality of diverted juice/syrup viz. Brix, Purity, TRS (Total reducing sugar) content to be recorded on four hourly basis by the sugar factory and distillery.
- v. In case of entire juice/syrup diversion, estimated sugar recovery may be calculated by using the following:

$$\text{Sugar Recovery \% Cane} = \frac{\text{Pol in Mixed Juice \% Cane} \times (J-36.40)K}{0.636J}$$

(Where J is the purity of mixed juice and value of K is 1.002).

- vi. In case, the sugar factory undertakes partial diversion of juice/syrup after accounting for it, the sugar recovery as it would have been in the conventional system shall be calculated by the above formula.

### **C. Diversion of sugar**

- i. Proper accounting shall be maintained for sugar dispatches by the sugar factory and consumption of sugar by the distillery on day to day basis.
- ii. Necessary sugar mingler, melter etc. shall be provided in the distillery along with mass flow meters and check weighment system so as to ascertain flow of sugar melt into the process.
- iii. Sugar shall be processed exclusively or along with sugarcane juice or sugar syrup only.

- iv. While processing such sugar along with other feed stocks, proper accounting shall be maintained about sugar dispatches by the sugar mill and consumption of sugar and other feed stock by the distillery on day to day basis.
- v. The sugar mill shall also maintain account of sugar diverted for production of ethanol while calculating the sugar recovery.
- vi. The data regarding receipt of sugar, ethanol production, fermentation and distillation efficiency shall be recorded by distillery on day to day basis.
- vi. The ethanol unit shall submit a work plan for arriving at ratio of sugar to other feed stocks which will require validation by NSI/VSI or any competent authority as designated by state Government.

बिहार-राज्यपाल के आदेश से,  
आमिर सुबहानी,  
सरकार के अपर मुख्य सचिव।

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